General Cubit Usage

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Accessing cubit

>> Release version

The release version is updated every 6 months.

>> Beta version

The beta version has the latest features, but results may change from day to day for some algorithms.

cubit windows

The default version of cubit is interactive and has two windows:

>> graphics

>> command line

No GUI is available at this time.

The graphics window uses x horizontal, y vertical and z out. Plots are in perspective.

Run-time options

No graphics	cubit -nographics
Run a command file	cubit filename
Batch	cubit -batch filename
No journal file	cubit -nojournal
Other options	-noinit, -solidmodel

The default saves all commands to a journal file named cubitnm.jou (cubit01.jou, cubit02.jou, cubit03.jou)

HELP

Cubit displays the correct usage of keywords through the help command.

```
help mesh
help volume
```

Cubit will offer the possible completions of a command. Type a question mark: ?

```
list?
volume?
```

Entering commands

Cubit actions are controlled by a series of one-line commands. There is no layered menu as in FASTQ.

Commands are not case sensitive.

Commands are order sensitive.

Commands are echoed to the screen and to the journal file.

```
create brick x 6
volume 1 size 2
mesh VOLUME 1
export genesis 'mytest.exo'
reset
```

Reset, Delete

To get rid of everything, enter

RESET

To get rid of the mesh, enter

DELETE MESH

To get rid of a body, enter

DELETE BODY n

Entering commands

>> A smart parser allows abbreviations.

cr br x 6
vol 1 siz 2
mesh v 1 - note error message
mesh vol 1

>> Cubit accepts numbers in all standard FORTRAN and C formats

2 2. 2.e-3

>> Objects are generally identified by number.

volume 3 curve 127

>> Ranges are specified by start, end and step size.

curve 3 to 9
volume 6 to 10 by 2

>> The command line has emacs-type controls

Control-p
Control-n
plus many others

Entering commands

For this demo, commands are coded as

verb {group | body | volume} <range> [options]
OR OR n OR optional
n to m OR
n to m by p

Graphics

>> Graphics are much slower than calculations

>> Changing the view

Commands are available, but the mouse is much easier.

Enter "mouse"

Move the cursor to the graph

- Hold the left button down and move the mouse to rotate the view
- Hold the middle button down to zoom
- Hold the right button down to pan
- To exit mouse-mode, type q with cursor over the graph.

The equivalent commands are written to the screen and the journal file

Graphics

>> display
Forces a redraw of the screen

>> Graphics mode (drawing mode)
Default is wireframe.
Try hiddenline: graph mode hidden
display

Try flatshade graph mode flat
display

Graphics are much faster with wireframe mode.

Graphics

>> Labels can be added to the graph
LABEL surface {on|off} - many other label commands

>> Objects can be selectively colored
COLOR surface 3 white

>> Visibility can be selectively turned on and off
object VISIBILITY {on|off}

Listing Information

The "list" command provides lists of objects.

>> list totals

lists the total number of geometric and mesh objects of each type

>> list volume 1 to 3

summarizes volumes 1 to 3; gives information on the next lower dimensional objects.

>> many other list commands

Playing a journal file

Commands from a journal file can be brought into cubit through

play 'filename'

The "pause" command stops the playback until the return key is pressed

Additional Commands

Be aware that there are many additional commands in cubit. Refer to the cubit manual for details.

Some additional commands:

zoom x0 y0 x1 y1
zoom vol n
zoom reset

graph autoclear on|off
graph axis on|off
graph *other*

command line control-
color *other*
graph mode *other*

pick {surf|curv|vol|...}